

What is claimed is:

1. A seat belt tension sensor comprising:  
a main plate;  
a travel member disposed in a travel member opening defined in said main plate, said travel member having portions defining a belt loop opening for receiving seat belt webbing therethrough;  
at least one leaf spring disposed in a fixed position relative to said main plate; and  
at least one bias spring biasing said travel member against said at least one leaf spring, whereby upon application of tension to said seat belt webbing, said travel member is configured to move relative to said main plate against said at least one leaf spring.
2. A sensor according to claim 1, said sensor comprising at least one magnet coupled to said travel plate and at least one sensor coupled to said main plate adjacent said at least one magnet, said sensor providing an output in response to flux imparted thereto by said at least one magnet, said output being indicative of a level of said tension.
3. A sensor according to claim 1, wherein said travel member comprises first and second ones of said magnets and has portions defining an opening between said magnets, said sensor being positioned in said opening.
4. A sensor according to claim 1, wherein said opening is generally u-shaped.

5. A sensor according to claim 1, wherein said travel member extends at least partially out from said travel member opening.
6. A sensor according to claim 1, said sensor comprising a shroud disposed over at least a portion of said travel member extending out from said travel member opening and also over at least a portion of said main plate.
7. A sensor according to claim 1, wherein said travel member is disposed entirely within said travel member opening.
8. A sensor according to claim 1, wherein said at least one bias spring comprises a compression spring disposed between said main plate and said travel member.
9. A sensor according to claim 1, said sensor comprising first and second ones of said leaf springs.
10. A seat belt tension sensor comprising:
  - a main plate;
  - a sensor coupled to said main plate; said sensor providing an output in response to flux imparted thereto; and
  - a travel member disposed in a travel member opening defined in said main plate, said travel member having portions defining a belt loop opening for receiving seat belt webbing therethrough, said travel member comprising first and second magnets separated

by a generally u-shaped opening, said sensor being disposed at least partially within said opening.